

AUDIT II

Topic Report Implementing Instruments

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1. Summary

The objective of this report is to investigate how and by which instruments energy audits (EA) can be implemented effectively into the (existing) policy mix, in order to initiate EA – and consequently energy savings – on a broader scale. In the context of this study instruments are considered to be effective if the customers of a target group get informed and interested in energy audits AND if they decide to carry out an EA.

EA can be integrated by two types of instruments: mandatory or voluntary ones. Each type has a set of **basic options**, consisting of one or a combination of the following instruments:

- „Quasi compulsory“ instruments
- Promotion/marketing instruments
- Instruments based on financial incentives

These options can be applied as stand-alone activity, they can be part of more comprehensive programme structure and/or they can also be embedded into an overall framework, referring to policy or legal constraints.

Mandatory instruments enforce EA by legislation. In principle they do not need any other instrument, except for social and information reasons. They seem to be better applicable for large and homogenous target groups, such as customers of the building sector or SME. Labelling schemes and building certificates but also energy management procedures can serve as examples.

Voluntary instruments can either have EA as compulsory element or they have EA as totally voluntary feature. Agreements are an example how EA can be made compulsory in the case a target group decides to join in. To convince the target group to do so mostly financial incentives are applied, using in general links to the tax system (tax advantages) or subsidies (partly financed audits or investments). Whether the one or the other is better suited depends mostly on national circumstances. The less “compulsory” EA are or the weaker the incentives are, the more promotion and marketing is needed to make the target group undertake an EA.

Voluntary instruments seem to be better suited for smaller not so homogenous target groups. Agreement schemes might be appropriate for large building owners or industry. Financial support in form of subsidies is helpful, but free riding has to be taken into account. Without financial incentives in place voluntary action could be triggered by well-designed services related to a target group’s specific needs.

Promotion and marketing are to a certain extent necessary for all basic options and relevant resources have to be foreseen. If a target group is not informed about certain incentives they will not use them. Smaller target groups can be addressed by face-to-face meetings, presentations and specific events. Paid ads or campaigns are better suited for bigger groups. Different paper material has to be available in different phases of the programme, while internet gets the usual media channel for distribution.

EA are usually linked to an overall **framework** such as an energy or climate strategy. Certain incentives need also a link to a policy or legal frame. EA are often embedded in a variety of **programme** structures, as they “sell” better, if they address specific needs of a target group. Good programme structures also ensure that the effects of EA can be evaluated.

2. Introduction

This report is part of the AUDIT II project co-financed by the EU SAVE programme. The aim of the AUDIT II programme is to make a comprehensive overview of the Energy Audit programmes in the EU plus Norway as well as the applicant countries. Furthermore, the aim is to make an analysis of different topics related to energy audits and to establish a network between people working with energy audit programmes in each country.

The objective of this particular report is to analyse the interface of energy audits to other instruments, by dealing with the questions: How can energy audits (EA) be integrated effectively in the policy mix? How can EA be implemented on a broader scale, i.e. which type(s) of instrument(s) “produce(s)” the most audits (and consequently high energy savings)?

The report offers different approaches how EA can be linked effectively to an existing mix of instruments, by taking into account two main paths: the mandatory and the voluntary one, each having several basic options.

The most important options are presented and highlighted by examples (see chapter 3 and chapter 4). Furthermore the link to an overall framework such as a climate strategy, energy efficiency action plan etc is explained. The report concludes with recommendations (chapter 5) in which cases which options are best suitable, also taking into account existing policy mixes.

3. Generic issues/Theory

Before going deeper into the subject it should be defined what means “effective” in terms of implementing instruments. In the context of this study instruments can be considered as effective:

- when they reach a certain target group (a customer gets informed about EA),
- when they draw the target group’s attention (a customer gets interested in EA)
- **AND** when they make the target group act (a customer carries out an EA).

In general there exist two ways how EA can be implemented, either they are mandatory or they are voluntary. According to these two ways also two main types of implementing instruments can be distinguished: mandatory instruments and voluntary instruments. Each type has a set of basic options, which can consist basically of one or a combination of the following instruments:

- „Quasi compulsory“ instruments
- Promotion/marketing instruments
- Instruments based on financial incentives

Some of these instruments can form a stand-alone activity or they are part of a more comprehensive programme structure. Furthermore they can be embedded in an overall (policy) framework, which might be helpful for setting up e.g. a programme, but this is not a pre-condition. According to these two types the “mandatory path” and the “voluntary path” are distinguished.

Fig. 1 presents this “big picture” and gives an overview on the basic options.

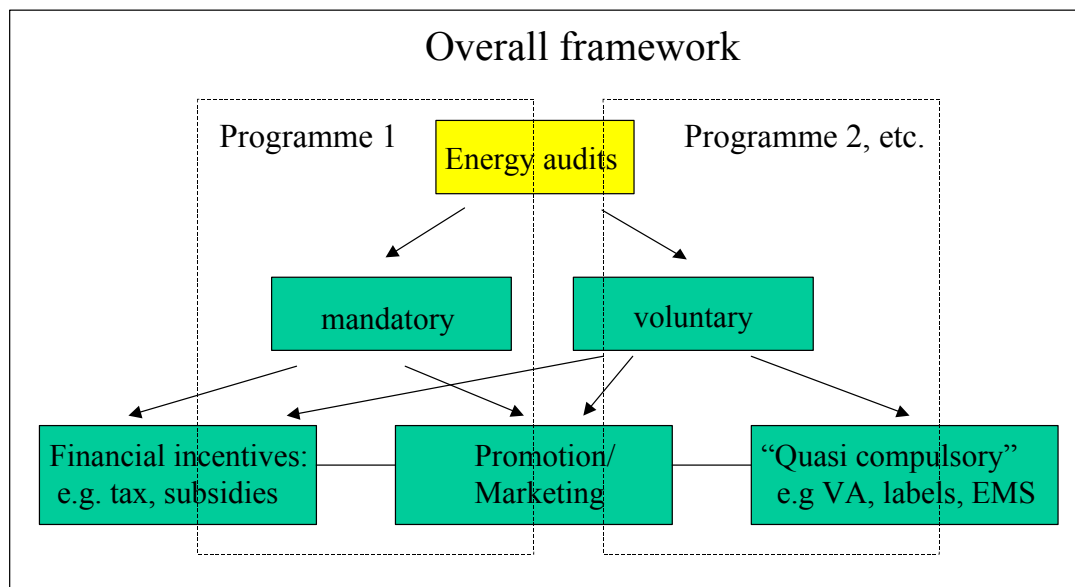


Fig. 1: The “big picture”: Basic options (paths) on how to implement EA

3.1 Definitions

The definitions given in this chapter are only to be understood in the context of this study.

Policy framework

EA can be embedded in an overall framework such as energy or climate strategies or (more specific) actions plans issued by national, regional or even local Governments (but also by the EU) e.g. to achieve certain targets. The fact that such a framework refers to EA, can give ministries, energy agencies or other bodies but also auditors the official “ok” to start more targeted activities.

Programme

A programme is in general a structured activity with a clear starting point and defined time scale, it has defined goals and target groups and published documentation. Energy efficiency programmes have the objective to improve energy efficiency in all or some target sectors. Here only programmes are considered which have at least an energy audit element being part of the activity.

Mandatory

EA are considered to be mandatory if they are legally enforced by laws, directives, regulations etc. If this is the case in principle no other instruments would be necessary to implement EA.

Voluntary

If EA are not mandatory (i.e. legally required) they are per definition voluntary. However, certain “voluntary” instruments such as voluntary / negotiated agreements (VA) and others (see below) can be used to make EA “compulsory” within an instrument.

“Quasi compulsory” instruments

With the term “quasi-compulsory” we understand instruments which, when applied, have audits as a compulsory element. In general these instruments include any scheme or programme – such as agreements, labelling schemes or energy management – where the clients have to carry out an EA if they join.

Instruments based on financial incentives

These instruments use financial incentives to make a target group undertake EA. Such instruments can be taxes (on energy, CO₂ and/or other emissions) or subsidies (on audits and/or investments) which can be used as “stick” or “carrot”. As pointed out above they can be linked to EA also by other instruments e.g. agreements.

Promotion/marketing

The objective of **promoting** EA is to make them well known to the clients/target group. The promotion can be considered as successful if the target group could be convinced to undertake an audit. This can be seen e.g. if they wish to receive more information, if they look on web sites, if they call the operating agent or if they order an audit.

In contrast **marketing** is a business activity and means to try to sell the audits. Thus, successful marketing means when the client finally orders an audit via a contract.

While promotional activities are mainly carried out by operating agents or administrative bodies, marketing activities are considered to be applied mainly by consultants who are also able to perform the EA. Of course, this is only a general view and exemptions do exist.

3.2 Basic options

In this chapter the basic options which were already presented in fig. 1 (the “big picture”) are described and discussed in more detail by using the general structure of the mandatory and the voluntary path.

These basic options are mostly combinations of different instruments, but they might also consist only of one single instrument. EA can be a stand-alone-activity or they can be – and this was mostly observed in the analysed country reports – integrated in specific programmes.

Table 1 gives a general overview on several programmes (which have EA at least as an element) identified in the national country reports, including the applied implementing instruments.

	EA programmes and programmes with EA as element									
Options	Building network, Norway	Industrial Energy Eff. Network, Norway	Long term agreements, Netherlands	EA Programme, Finland	Labelling schemes (ELO/EM) Denmark	Green tax package - Denmark	Electricity distribution comp. EA, B- Flanders	Regulation for energy management Portugal	Contracting federal buildings, Austria	Dec. making Support Scheme, France
Overall framework	No specific links to EA	No specific links to EA	Energy conservation (EC) action programme: Incl. tax plan, climate policy	Energy strategy and conservation program, Climate strategy	Energy 21 (action plan), act to promote energy saving in buildings, exec. orders	Energy 21 (action plan), Green Tax scheme	EE plans of Flanders	Governmental decrees, operational program for econom. activ. (POE)	Nat. Climate strategy, Decision of the council of ministers	National climate change program and EE program
Mandatory / Voluntary (compulsory)	V	V	V (C for agreements)	V (C for agreements)	M	V (C for agreements)	V	V (C to get subsidies)	V (not legally required, but strong will)	V
Target group	Non resident. buildings and coop. (private and public)	industry	Large and medium industry	Industry, service sectors energy prod.	buildings	industry	Public/private service sector, industry, households	Transport, industry	Federal buildings	Industry, buildings
Financial incentives: • Taxes • Subsidies - audits - invest	No 100 % no	No Max. 28.750 € +monit. <50% no	Yes No	No 40-50% 15%	No No	Reduction 88% (24%) yes < 30% (2-9a)	No Yes Yes	No No Yes	No No No	No Yes 50-70% Yes
Promotion/ Marketing	Promotion by OA and regional EE centres	Promotion by OA of IEEN	Promotion by Industrial associations and NOVEM	Promotion by OA Marketing by auditors	By DEA	No	PR campaigns by electricity / gas supply firms, general promotion by ministry	No	Marketing by ESCO, promotion by E.V.A.	By ADEME and regional delegations
Agreements, EMS, labels, others	Submit data, EMS, action plan	Submit data, EMS, action plan, benchmarks	LTA: Strong agreements (benchmarks)	Agreements covering all target sectors	Labelling	Agreements for tax reduction	No	No	Energy performance contracting	Labelling, certificates

Table 1: Overview of implementing instruments used in EAP

Besides pure audit programmes the main types of energy efficiency programmes or schemes having EA as an element are: sector or branch specific energy efficiency networks, voluntary or negotiated agreements, energy management schemes, labelling schemes, energy performance contracting, energy benchmarking and best practice programmes. These programmes and activities have all the same objective: They want to convince a specific target group to increase its energy efficiency. Policy makers have to decide which of these programmes, schemes or activities are the most effective to address a certain target group.

In the following a short description of the main features of the above mentioned programmes and schemes is presented, highlighting also the link to EA:

Customers of a certain target group can become member of a formal or informal energy efficiency **network**, which is managed by an operating agent, who provides or organises services for its members. Services usually concentrate on branch or sector specific issues. EA can be a part of these services or can be a precondition to join the network.

The objective of **labelling schemes** is in general to increase energy efficiency by presenting the energy status and values e.g. of a building in a certificate. Within **labelling** schemes energy audits can be necessary to get e.g. the label or the certificate.

The nature of an **agreement** is, that a (member of a) target group agrees mostly with a policy maker to improve energy efficiency and the policy maker offers in return certain incentives. EA can be a requirement e.g. to receive tax advantages or they can justify (higher) subsidies. Agreements are very often applied in the industrial target group, as industry tries to avoid mandatory instruments, being afraid of negative market effects.

By joining an **energy management** scheme a target group should learn how to continuously analyse the energy consumption of a building or of a company. They should also identify on a continuous basis possibilities to increase its energy efficiency, which can be done by EA. Also the involvement of employees (shop floor) can be part of the scheme.

Energy performance contracting is a financing scheme. An energy service company (ESCO usually a consultant) analyses the energy potential of a building or company and consequently realised identified energy efficiency measures. The investments are covered by the ESCO and are paid back by the saved energy costs. After the pay back time all equipment and the energy savings belong to the customers. EA can be used to identify and/or to monitor the energy efficiency measures and improvements.

Energy benchmarking schemes compare energy indicators (e.g. energy consumption per unit produced) within a specified target group in order to identify energy efficiency potentials. The benchmark comparison can initiate EA as a consequent step to identify then concrete energy efficiency measures.

Best practice programmes offer a target group practical examples of energy efficiency projects and measures already realised at comparable customers. Similar to benchmarking schemes they can initiate EA in order to identify concrete energy efficiency measures.

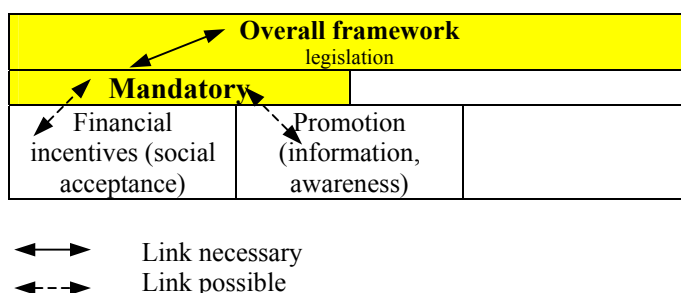
3.2.1 The mandatory path:

If audits are legally required in principle no other implementing instrument is necessary from the EA perspective (see table 2). However, there might be other reasons (social acceptance, information etc) to be considered. This can lead to the integration of financial instruments to lower the individual burden of parts of the target group. Also promotional activities might be important in order to inform the target group about the benefits of the mandatory activities or to increase the awareness for energy saving issues. Promotion can also accelerate the implementation of a legally enforced measure.

In case of a mandatory instrument (e.g. the Danish energy labelling for large buildings (ELO)) a link to an overall framework is a precondition, as it needs legislation.

Depending on the size of the target group the amount of EA “produced” by mandatory instruments per year can be considered as high, from the time the legislation comes into force.

Table 2: The Mandatory path



3.2.2 The voluntary path:

Compared to the mandatory path the voluntary path offers more possibilities. Different combinations of “quasi compulsory” instruments, of promotion and marketing activities and/or of financial incentives are possible (see fig 1: “the big picture”).

- The “quasi-compulsory” option:

In general EA can be made compulsory through any scheme or programme which has EA as a compulsory element. Customers can choose voluntarily if they want to sign-up or join a certain instrument. However, if they decide to do so, then EA have to be carried out.

In many cases this quasi-compulsory option goes together with financial incentives, in order to increase the willingness of the target group to make some additional effort, i.e. to carry out an EA. These incentives are mainly

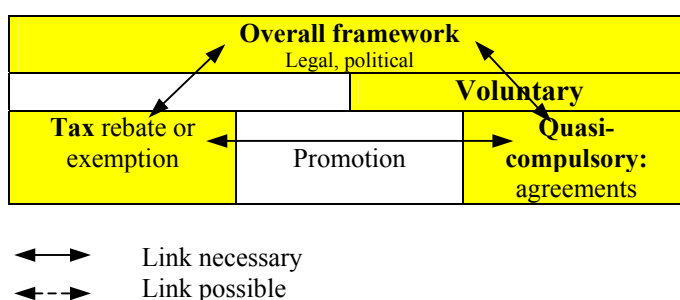
- subsidies (for audits or investments)
- or tax advantages (exemption, relief, rebate).

Depending on how strong the incentive is to choose the quasi-compulsory option, it might need more or less promotion.

The link to the **tax system** can be considered as a strong incentive. The willingness of the target group to sign up e.g. to an agreement will be rather high, especially if there are significant tax advantages involved. Then they are almost “forced” to join and promotional activities could therefore be more simple. However, the administrative efforts might be high as it needs a strong legal or political framework (see table 3).

Depending on the size of the target group the EA “produced” by this option can be considered as high, however, the target group itself might be rather small due to administrative restrictions.

Table 3: Quasi-compulsory option: Agreements with link to the tax system

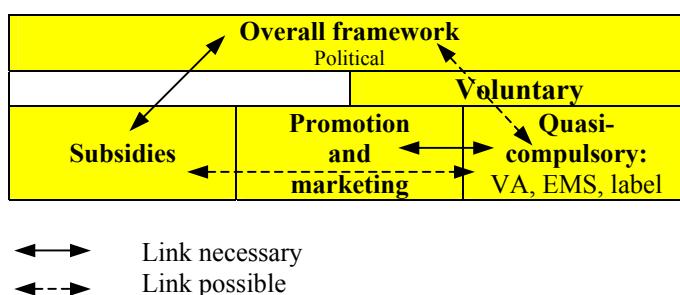


If financial incentives consist mainly of **subsidies**, then **promotion** and marketing plays a bigger role, to make the target group choose a quasi-compulsory option, since subsidies can be considered as a weaker incentive than taxes. All investigated programmes in this category have at least some subsidies in place, either for partly financed audits (100% was only observed for buildings related target groups), or for investments (up to 30-40% max). In some cases investment subsidies are only granted if an audit is performed.

The promotion of the programme or scheme is mainly done by authorities or operating agents. Marketing activities are mainly done by the auditors directly at the customer and can be very effective, if they are supported by well promoted programmes.

The link to an overall framework (national energy efficiency plan, climate strategy etc) can increase the awareness of the target group and, especially if strong targets are involved, it can be an essential driver for setting up a programme. Furthermore it is considered necessary to earmark a certain subsidy volume for EA in a political framework (see table 4).

Table 4: The Voluntary path: Quasi-compulsory option with subsidy



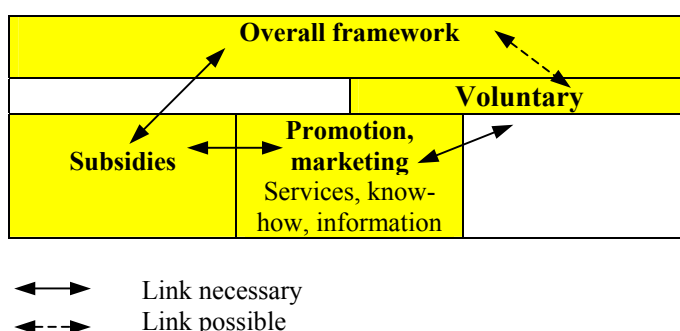
- The “subsidy – promotion” option

If EA are not compulsory within a scheme, the remaining options are either “subsidies” or “promotion” or both. In case only financial incentives are applied without adequate promotion the output of audits might be rather limited, especially if financial resources are short. If the customers are not informed about the financial incentives, it will get difficult to achieve results. Thus, a minimum of promotion should always be in place.

If only promotion is considered to implement EA, it has to be well focused on (economically) profitable outputs of EA to make the target group act. As additional incentive it could be embedded into a networking activity, offering services, information and know-how. However, in most of the identified programmes these two options were combined (see table 5).

Most EA activities have also a link to an overall framework such as energy efficiency plans or climate strategies. This link is not a precondition, however, it can be very helpful to implement a programme. As already mentioned above, it is considered necessary to earmark subsidies for EA in a political framework.

Table 5: The Voluntary path: “Subsidy – promotion” option



3.2.3 Promotion/Marketing:

Since promotion and/or marketing activities play an important part in many basic options, this chapter explains the different types of activities in more detail.

The most applied types of promotion observed in the country reports are the distribution of paper material such as leaflets, brochures etc., mostly distributed via the internet. Furthermore publicity activities but also campaigns, events/presentations and face-to-face meetings are used to get customers interested in EA. The suitability of these channels is often depending on the size of the target group.

A general overview on which promotional material and activities are used in different programmes is summarised in table 6 and put into relation to different target groups and the size (audits per year) of programmes.

Table 6: Overview of promotion/marketing options

Programme Type	EAP Finland	ELO/EM Denmark	DMSS France	IEEN Norway	LTA Netherlands
Target group + av. number of audits per year	500 buildings 100 industry	5.000 buildings	3.000 buildings 350 industry	40-50 industry	100 industry
Leaflets, brochures etc	X	X	X	X	X
CD ROM					
Paid ads			X		
Publicity	X		X	X	X
Campaigns	X	X	X		
Internet	X	X	X	X	X
Face-to-face	X			X	
Presentations, events	X			X	X

In the following part each promotional material or activity is shortly described by its main features.

Leaflets, brochures, reports etc

Under this type all paper products are summarised which inform about the programme in general or about EA in particular. They can reach from leaflets (for more promotional reasons) to brochures and annual reports (which contain more information). Mostly they are distributed at events, are available via Internet or are send by mail.

CD ROM

CD ROM is a means to distribute information material in electronic form (on a disc), however, is in strong competition with the Internet. It makes sense to use CD ROMs for more complicated operations, which might take to long on the Internet.

Paid ads

Under paid ads we understand paid advertisements (e.g. in TV, newspaper etc), being considered as rather expensive.

Publicity

Publicity means positive feedback (not paid) in media such as TV/radio/newspaper and more specific articles in professional magazines. This can be achieved if involved actors have good contact to media.

Campaigns

In general a campaign is “a connected series of operations designed to bring about a particular result”. In terms of EA a campaign can be considered as a targeted promotional action over a specific time in which several types of promotion can be used in a certain combination (TV spots together with mailings etc). The particular result of a campaign can be a general one (e.g. raise awareness) or a particular one (promote the EA).

Internet (WWW)

With Internet we mean the distribution of information and promotional material about the EAP via the world wide web. It can be used actively (to send information to the target group) but also passively (clients can search for information which is available).

Face-to-face

This means that in general auditors but also other actors (OA etc) have face-to-face meetings with their possible clients to sell the EA. This is considered to be more a marketing activity.

Presentations, Events

The EAP can be presented by involved actors (often the OA or administrators) at events where the target groups takes place. It seems that such presentations at events can have great importance especially in the start-up phase of an audit programme. Also workshops can have promotional effects (e.g. auditors training etc) but they mainly serve for another purpose (e.g. training).

4. Practical Examples

This chapter presents practical examples on how EA (and their specific programmes) are implemented in the specific national policy mix, with the main purpose to illustrate the different basic options mentioned in chapter 3. Therefore the examples are structured in the same three groups: examples under the mandatory and under the voluntary paths as well as examples for promotion and marketing. The selection of examples is not related to success or quality parameters, it reflects rather the availability of information.

4.1 Practical Examples under the Mandatory Path

From the programmes identified in the country reports there exists only one example under the mandatory path, the Danish Energy Labelling Scheme (ELO), which targets buildings (see chapter 3, table 2).

Example 1: Danish Energy Labelling Scheme (ELO)

ELO operates since 1996 and targets large buildings (or energy management in large buildings) and small buildings. Within the ELO scheme are about 28.000 buildings, about 15.000 have been labelled by the year 2000. The coverage is about 52 % in building area or 42 % in number of buildings, however, there are big regional differences. The average audit volume per year is about 5.000 buildings.

Energy labelling is mentioned as a tool in the Action Plan to meet the targets of the National Energy Policy. Since the ECO scheme is mandatory it has to be linked to a **legislative framework**. Most important is the Act to Promote Energy and Water Savings in Buildings No 485 from June 1996, which describes the main guidelines for mandatory energy labelling of large and small buildings. According to this act an approved energy consultant has to perform the energy rating and to establish or update the energy plan every year.

The ELO scheme is promoted by the Danish Energy Agency (DEA) using mainly brochures, campaigns and Internet web sites. There are no subsidies involved. The energy consultants are paid by the building owner. The consultants and DEA finance the ECO secretariat.

From an evaluation it was concluded that a coverage of about 50% is not satisfactory. As a consequence an information campaign has been started to increase the number of labelled buildings.

4.1 Practical Examples under the Voluntary Path

Denmark's Green Tax Scheme fits into the category "*quasi-compulsory*" with *tax* (see chapter 3, table 3). Other programmes under this category are the UK Climate Change Levy Agreements, and the Dutch Long Term Agreements (the latter fits also into the next category).

Example 2: Denmark's Green Tax Scheme – Agreements for industry

The Green Tax Scheme exists since 1996 and different CO₂ rates for industry have been introduced since then. All revenues raised by the CO₂ tax are recycled to industry through lowering non-wage labour costs, by subsidies and – as a major driver for EA – by applying *lower tax rates* to energy intensive industrial companies on condition that they enter into an *agreement* on energy efficiency with the Danish Energy Agency (DEA). Within this agreement EA are compulsory. The main reason for this was to avoid that Danish companies have competition problems in the international markets. The average yearly volume of agreements amounts to about 30 individual and about 40 group agreements.

Subsidies for energy audits or for investments are related to the implementation of measures identified in audits. They are in general granted up to 30% for investments with a pay back between 2-9 years. Only projects with high CO₂ reduction are subsidised.

No special promotional instruments are in place which can be linked to energy audits.

Finland's EAP fits into the category "*quasi-compulsory*" with "*subsidy*" (see chapter 3.2.2, table 4). Other programmes under this category are the Dutch Benchmarking Covenant (but also the LTA scheme), which both have a link to tax relieves. But also the Portuguese Regulation for energy management (RGCE) fits in here, as EA are compulsory in order to get investment subsidies.

Example 3: Finland's energy audit programme (EAP)

The target groups are industry, service sectors and energy sector. The EAP runs since 1992 with an average volume of about 600 audits per year (of which 100 are in industry). This corresponds to a total building volume of 83 Mm³ and to a total number of 450 industrial companies with an energy consumption of 41 TWh/a heat and fuels and 23 TWh/a electricity (all end 2000).

The audits are *voluntary*, however, they are connected to a *agreement* (VA) scheme, i.e. if firms sign an agreement they have to undertake an audit. Main incentives are subsidies (40%) which are higher if a company signs the agreement (50%). In this case also subsidies on investments are possible (10%) if these are proposed in the energy audit reports. Since 2002 (due to the EC state aid directive) the funding rates slightly changed. Now all clients get 40%, but subsidies on investments were raised to 15%.

EA are supported via a comprehensive EA programme and are promoted actively by its operating agent. This is complemented by the additional marketing of the auditors towards the clients. The Climate Strategy, the Energy Strategy and the Energy Conservation Programme build the *overall framework* for EA in Finland.

During 1992-1997 no agreements existed. EA were voluntary but subsidised. The EAP was running well, but the audit volumes were totally dependent on market forces. During recession consultants had a lack of work and clients were in need for any kind of savings. The EA volume went quickly up. When the economical situation improved this changed completely. Consultants had other work and clients did bigger investments but had little interest in energy savings. The OA had little chance to fight against these market forces.

With the VA scheme in place (triggered by Kyoto process and climate strategy) the auditing volume could be kept high. The positive effect of VA was that if an agreement was signed at top level, the EA sold almost by themselves (more audits at one company). This also influenced the promotional activities, which were then oriented more towards *marketing* the VA and not the EA as such. The voluntary approach seems to satisfy the clients as well as the OA. Even the quality is supposed to be higher compared to a mandatory approach, as there might be the danger that companies then would do the EA just as cheap as possible.

Norway's IEEN fits into the category “*subsidy-promotion*” (see chapter 3.2.2, table 5), as well as the French DMSS, which is described further down.

Example 4: Norway's Industrial Energy Efficiency Network (IEEN)

The IEEN operates since 1990, with subsidies (grants) involved since 1996. The target group is industry. IEEN has now a total volume of about 440 member companies, representing 50% (37 TWh) of the industry's energy consumption. This corresponds to an average audit volume of about 40-50 audits per year.

EA are a *voluntary* but central element of the IEEN, which can be considered as an *incentive scheme*. By joining the network companies have to submit energy and production data, introduce an energy management system (EMS) and establish an energy efficiency action plan. In exchange they receive a benchmarking analysis and access to certain *subsidies* for the EMS and the EA. The yearly budget for the IEEN increased steadily since 1990. For 2002 it is 2,8 Mio. € of which 1,2 Mio. € is reserved for subsidies/grants.

If companies carry out a Phase-1 Audit (walk-through-audit) they receive a 90% grant (up to 3.750 €). For the more comprehensive Phase-2 Audit they get 50% (up to 25.000 €). For large companies (and complicated processes) this limit can be even increased.

The audits within the IEEN are promoted through articles in industrial magazines, by trade organisations and in specific workshops and seminars but also by private consultants working with energy audits.

Norway's energy efficiency policy – to reduce the environmental impact of energy use and production – can be regarded as an *overall framework*, but there exists no specific link to energy audits.

In the initial phase of the Network industrial associations were positive to join, since it provided an opportunity to establish a positive dialogue with the government concerning energy efficiency questions. The reason for companies wishing to join the Network is twofold; Firstly, membership entitles them to *grants* for establishing energy management and undertaking an energy audit.

Secondly, membership gives them access to valuable information about their energy performance vis-à-vis other companies in the same sector, and *information* on new technological developments and methods which could lower their specific energy consumption.

For the time being the French DMSS fits in the category “*subsidy-promotion*”, but it plans for the future to make EA compulsory within the scheme.

Example 5: The Decision making Support Scheme in France (DMSS)

The DMSS is an energy audit programme which started in 1999 and targets buildings as well as industry. It has a yearly volume of about 3.000 buildings and 350 industrial audits.

The whole scheme is *voluntary* and a variety of *incentives* are available for most customers depending on the sector and type of audit. EA are mentioned explicitly in the national *climate change programme* and the national programme for energy efficiency.

In the building sector energy *labelling* and *certification* will ensure that EA are carried out. In the industry sector it is planned that clients which carried out an EA (approved by ADEME) can benefit of a bank guarantee (FOGIME scheme). The idea is to foster energy saving investments by facilitating for industry the access to loans. As a side effect energy audits should be encouraged.

The following *subsidies* are foreseen: Pre audits are supported by 70 % (90 % till end 2003), more detailed audits by 50 % (max 30.000 €), feasibility studies by 50 % (max. 75.000 €).

Promotion is done by the national agency ADEME and local/regional partners.

One programme, which relies only on promotion and marketing, having no subsidies in place at all, is the Austrian energy performance contracting programme for Federal buildings. In this special case promotional and marketing activities are focused on the convincing concept how to finance the investments.

Example 6: Austria's Energy Performance Contracting for Federal buildings

This programme is just going to start due to a Decision of the Council of Ministers. However, it is based on the positive experience with 50 schools. The selling argument of this approach is the concept of energy performance contracting itself. ESCOs identify and realise the economical feasible energy efficiency measures, but also do the financing. The target group (public building owners) needs not to invest themselves ("no money touched"), they pay back the investments with the saved energy costs. The concept is promoted by the Austrian Energy Agency (E.V.A.), marketing is done via the ESCOs. EA are used to identify the measures. Monitoring is very essential with this concept as the ESCO guarantees the energy savings. The concept works especially well in public sector, but there exists also positive experience with private owners.

4.3 Practical Examples for Promotion/Marketing

The practical examples in this chapter will point out how promotional and marketing activities can be used effectively to "produce" a high amount of audits. The indicated tables give more detailed information on the activities and materials used.

EAP – Finland

The Finnish example (see table 7) has two main features which proved very effective throughout the whole timeframe of programme: the promotion by the OA and the marketing by the auditors. The auditors – being consultants – try to sell the EA to make profit, mainly by face-to-face meetings with their possible clients. The OA supports the auditors by providing good marketing material and by promoting the EAP in general to create a positive public image. This was considered to be very helpful for the auditors to actually "sell" the audits.

Especially in the start-up phase of Finland's EAP presentations at special events (where the target group is present) were very important and triggered many audits. In these early times also sector promotion campaigns were undertaken (general information through mail), but were not considered as very cost-effective comparing the number of audits initiated with the efforts put in (person days and money). One experience with campaigns was also that they were quite time consuming (e.g. phone questionnaires). It was concluded that in Finland EA do not sell that way. If in future campaigns might be applied they would be very targeted to certain clients groups, following them up till individual decision making.

In general EA are not different from any other services provided in the market. One problem here can be the fact that if the "operator" of a programme is an authority, a branch association or a research centre, it probably does not have enough experience on marketing.

Within the EAP it is mostly the auditor who "turns the deal in". The OA can help, assist the clients to turn to good auditors and give some advice on how to order the audit. On the other hand the auditors see Motiva's work very important when they develop and maintain the good publicity on the EA. For the auditors it is much easier to go to a client who probably has heard of EA before: TV, radio, articles, case studies on the same sector, maybe colleagues telling about their experience, competitors... Also the material the auditors use, is more reliable if it is developed by an independent actor then if it is developed by the auditors themselves.

DMSS – France

The whole decision support making scheme (through all sectors and topics) was promoted by disseminating leaflets and articles in ADEME's newsletter and on Internet. The leaflets are sector oriented: Industry (& agriculture), building, local authorities, transport.

The financing system is also presented on ADEME web site (www.ademe.fr). The DMSS has been advertised through two general information campaigns not referring directly to audits but aiming at raising public awareness. One was focusing on environmental topics (in magazines and the daily press), the second was emphasising the relationship between energy and greenhouse gases emissions (by a series of TV spots).

The preliminary marketing activities have been limited to inquiries on the cost of the various services. A few surveys have been launched to have a better understanding of the appraisal both by audit clients and by energy auditors of the different aspects of the scheme: costs, support level, content of auditing models and specifications.

A further demand comes from the Regional delegations in charge of marketing the product to have "sales talk" support documents to improve their marketing abilities and be able to convince more easily the potential clients from the different target sectors.

IEEN – Norway

The main promotional and marketing activities of the Norwegian IEEN are presented in table 8.

The following tables describe as examples the contents of the applied promotion/marketing material or activity, including information by whom and how it is distributed and by whom it is used. The tables also indicate why and when the material or activity is used. Where possible average estimated costs are included.

Table 7: Promotion and Marketing activities – Example: EAP Finland

EAP Finland Material, activities	Which Content?	From whom? Used by whom?	How distributed?	Which costs?	Comments Why (not) used? When used?
Leaflets, brochures, reports	Step-by-step brochure: how to order and carry through EA	Produced by OA. Used by OA and auditors.	Mainly in Expos and presentations By mail to selected clients Available through www	6.000 €	Should be prepared in the beginning of the programme. It will reduce the need for personal advice
	EA brochure: general info for marketing	Produced by OA, Used by OA and auditors: 1 for industry and 1 for service sector	Mainly in Expos and presentations. By mail to clients.	10.000 €, some 4000 copies taken on both	Throughout for marketing, problem is the need for up-dates when the EAP is developing
	Case study brochures	Produced by OA Used by OA and auditors	By mail to all auditors and selected clients. Available through www	2.000€ per case study incl. 3-4 person days, 2-3.000 copies	Difficult to say what is the real effect but requested by both clients and auditors; should be produced throughout the EAP
	Annual report	Produced by OA. Used by all organisations involved in the EAP	Via mail to all auditors and other selected organisations	Some 3 weeks of work needed to prepare the report	Can and should be prepared as soon as volumes are big enough. Used as a annual evaluation on the EAP
CD ROM	CD ROMs are not commonly used in Finland for marketing				
Paid ads	Paid adds were tried a few times in the early years but it is costly and not very effective				
Publicity	Articles in magazines, news papers, radio TV	Mainly initiated by OA, incl. firm interviews, but also the Media ask for good material	Press releases on regular bases, Good service for Media' (good relationship needed)	Total working time is ca. 2 weeks per year	Requires immediate actions when the media has an interest
Campaigns	Campaigns require a lot of work and have been used only in special cases in the early stages of the EAP				
Internet	Comprehensive information on the EAP, incl. all possible docs	OA maintains	www.motiva.fi		Essential tool today, the better the www service the less need for personal advice by phone
Face-to-face	Marketing and closing the contracts	Auditors' activity mainly, the OA does in special cases (big clients)		Auditors' part of marketing their other services	The OA can have some amount of face-to-face meetings per year throughout
Events, presentations	General presentations of EAP, special presentations on specific sectors	Normally by the OA, sometimes also auditors contracted by the OA	All kind of events where potential clients are present	Ca. 2 working days	Especially in the beginning. In the earlier years some 75...80 presentations per year. In 2001 some 25....30.

Table 8: Promotion and Marketing activities – Example: IEEN - Norway

IEEN Norway Material, activities	Which Content?	From whom? Used by whom?	How distributed?	Which costs?	Comments Why (not) used? When used?
Leaflets, brochures, reports	Handbook on Energy Management Systems	From OA to industry and auditors	By mail In workshops		In the beginning, to raise awareness on EA and Energy Management
	Case study brochures	OA and auditors	By mail: but also used in Expos and presentations	10 day/ brochure, approx. 9.000 €	Throughout for marketing
	Energy statistics, benchmarks	From OA to all members	Via mail and Internet	50.000 €/a	Throughout
	Annual report	From OA to the companies and the government	Via mail Internet	70.000 €/a	Throughout
CD ROM	CD ROMs are not commonly used as a marketing tool in Norway. Internet is often a good substitute				
Paid ads	This is not considered as a relevant marketing tool to reach the target group.				
Publicity	Articles in technical magazines and news papers, TV	Mainly initiated by OA			When interesting material/information is available
Campaigns	Not relevant to reach the target group				
Internet	Information on programme level, brochures, application forms, etc	OA distributes for use by companies, auditors, government, etc,	www. Enoknorge. no		Throughout
Face-to-face	OA and Auditors promotes the audit scheme	OA or Auditor visit clients on site		0,5 day visit if OA, cost 830 €. Auditors carry their own costs	Throughout
Events, presentations	General presentations of EAP	From OA to Auditors or companies	at events such as auditors workshops and sectorial energy meetings	Approx. 2 working days, i.e.1.720 €	Systematic approach

5. Recommendations

This chapter is written from the viewpoint of a policy maker and discusses the pros and cons of the identified basic options (see also chapter 3 and 4). Recommendations are derived in which cases which options are best suitable, also taking into account the existing instrument mix. Different approaches how EA can be implemented on a broader scale are elaborated.

Increasing energy efficiency is much a matter of how to reach the customer and how to convince a customer to act (carry out EA). Before choosing a certain type of implementing instrument a policy maker needs detailed information about the target group which should be addressed. Is the target group homogenous (e.g. tenants, energy extensive SME, certain types of buildings) or is it very diverse (e.g. energy intensive industry)? Is it related to companies or to households/individual persons? Does it concern processes or buildings?

When applying a new instrument it is also necessary to know about all existing instruments which are already available. Some instruments can be very promising as such, however, it might be difficult to integrate them to an existing mix of instruments. For the policy maker it is important to know whether EA are already in place in one or the other way (e.g. existing subsidies, existing regional or local activities, not energy related audit schemes etc). If this is the case then it might be worthwhile considering to build on these existing structures.

5.1 Mandatory instruments

From the observed country reports the mandatory path seems to be relevant mainly for the building target group. It is probably no coincidence that within the observed country reports no industrial customers were addressed by mandatory instruments. This might reflect the fact that bigger companies are mostly well organised and have means to avoid mandatory constraints. Therefore it has to be taken into account if a legal enforcement is practically possible. One other point is also if the enforcement can be controlled easily or if it is connected to high administrative burden.

The amount of EA “produced” by legal enforcement can be theoretically very high. Thus, if a huge but rather homogenous target group should be convinced to carry out audits, this instrument might be the right one. EA could be linked then e.g. to mandatory labelling schemes or building certificates. Also energy management procedures might be imposed by legislation, which would address SME.

Mandatory instruments might be applicable if standard energy efficiency measures should be realised, which could be identified by rather simple audits (more of the walk-through-type). Whether then audits are necessary at all, this question remains open.

Recommendation 1: Mandatory instruments

Mandatory instruments might be the right way,

- if the target group is homogenous and big (more than 1.000 audits per year),
- if standard and/or cost-effective measures should be realised on a very broad scale.

Therefore the building sector (labelling, certificates) seems to be more suitable as target group than the industrial sector. Energy management procedures targeting SME could be also enforced by legislation. If more technically difficult and not so cost-effective measures should be stimulated, or if the target group is rather small, then voluntary instruments might be better suited.

5.2 Voluntary instruments

Under the voluntary path a policy maker has to decide whether EA should be compulsory within a certain instrument, or if they should be totally voluntary. To make EA “*quasi-compulsory*” might be very tempting, however, it has to be considered, whether appropriate incentives are in place, to make a target group choose this option. Such incentives are mostly of financial nature, either through subsidies or by links to the tax system.

The *agreement* option (i.e. EA as part of an agreement) seems to be well feasibly for industry, however, a policy maker has to consider, that different countries have different traditions with this instrument. A precondition to apply it successfully is, that authorities and industry, the usual signing parties of an agreement, have to trust each other. In a negotiation process they have to agree then on clear targets which have to be achieved in a certain time scale.

To link agreements to the *tax system* is of course a strong incentive, but it has to be checked whether the legal basis is given. If this turns out to be difficult or the national circumstances do not allow it (taxes are a “touchy” matter) then agreements can be linked also to subsidies. In this case carefully targeted promotional activities are needed.

If EA are totally *voluntary*, subsidies and promotion/marketing activities get higher priority. Of course high *subsidies* seem to be very convincing, however, they can imply the problem of free riders (customers do it anyway). Therefore audits should only be partly financed and there must be very good arguments to increase subsidies above 50%. To which extent subsidies are necessary at all to make a target group undertake an audit (and consequently save energy and money) is out of the scope of this report. But the fact that almost all programmes have some subsidies in place to implement EA, might give an indication of its importance, at least in terms of promotion/marketing aspects.

If financial incentives are lacking then the *network* character (services, information, know-how transfer etc) might be the convincing argument to make a target group undertake an EA or join a programme. Also in this case promotion and marketing activities are essential.

Recommendation 2: Voluntary instruments

In general it can be said that the less “compulsory” it is to perform an EA, the more promotion and marketing is needed to convince a customer to do so. Voluntary instruments seem well suited for smaller not so homogenous target groups. Linking EA to the tax system is a strong incentive, however, it depends on national circumstances if this option is feasible. Agreements are a means to get the confidence of large buildings owners or of industry. Financial support in form of subsidies for EA or investments is helpful, but free riding has to be taken into account. Without financial incentives voluntary action can be triggered by well-designed services.

5.3 Promotion and marketing

Promotion and marketing are essential for almost all types of implementing instruments. If the target group does not know about the incentives they will also not use them. Promotion needs not to be expensive per se, but it needs know-how to do it the right way. EA are like any other service which have to be sold on the market. Therefore policy makers who have to promote EA, should have a decent knowledge about what means promotion and marketing.

EA for smaller target groups (< 100 audits per year) are often sold by consultants/auditors via face-to-face meetings with the customer. They can be well supported if the host programme is well recognised in the public. This positive image has to be achieved by the operating agent or by the authorities.

In the start-up-phase of a EA programme it needs leaflets and brochures to promote the EA to the customer as well as to the auditors. Other paper material like case studies or annual reports are needed throughout the lifetime of a programme. Internet is definitely a means to promote a programme widely, but also to save time and costs of the OA, if adequate information is available on the web. All paper material can be published on internet. All these means are suitable target groups of different size. Presentations and targeted events, which are especially helpful in the start-up-phase to reach and inform the customers, are better suited for smaller target groups. Paid ads and campaigns, which are used to a lesser extent in the investigated programmes, are only suitable for big target groups.

Recommendation 3: Promotion and marketing

Almost all implementing instruments need promotional and marketing activities in one or the other way, thus relevant (financial) resources have to be foreseen. Face-to-face meetings, presentations and specific events are better suited for smaller target groups (< 100) while paid ads or campaigns are used for bigger ones. Internet is the usual media channel that takes over. Different paper material has to be available in different phases of the programme. Also the service character of promotion (provide information, know-how etc) is important, especially if financial incentives are lacking.

5.4 Overall Framework

Linking EA to an overall framework such as an energy efficiency plan, a climate strategy or similar (policy) frames can be very helpful to start up a programme, especially if strong (quantitative) targets are in place. Mandatory instruments have to be linked to the legal framework, with voluntary ones it is suggested, however not a precondition. With agreement schemes the link to legislation (in case of tax) or to the political framework is also necessary. The same counts for subsidies to guarantee the financial resources over a certain time.

Why programmes?

In general EA are integrated in a variety of programme structures (not only in pure EA programmes). This is the case because EA can be “sold” well by connecting them to other issues which address the needs of a target group in a better way. Programmes fulfil also other purposes than “only” the EA aspect. They can be especially designed for certain target groups; e.g. agreements take into account the wish of the target group “industry” to avoid legal implications. Contracting schemes take into account that the target group “building owners” has sometimes investment problems. Energy benchmarking proposes a comparison with competing customers and so on. Therefore good programmes are designed in a way that they address a target group by taking into account their day-to-day (business) activities. If EA can be linked to these activities, than the policy maker is on the right track.

Increasing energy efficiency needs a comprehensive effort, i.e. implementation of energy management (awareness), undertaking EA, triggering investments and following it up. In other words achieving real energy efficiency improvement demands long term dedication. It is not a one off thing. By using programme structures this long term perspective can be taking into account, fulfilling at the same time a policy maker’s wish to monitor and evaluate the effects of EA.